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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,833

02/02/2006

Atsushi Ogawa

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11/05/2007

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EXAMINER

PHAM, TOAN NGOC

ART UNIT

PAPER NUMBER

2612

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,833

Applicant(s)

OGAWA ET AL.

Examiner

Toan N. Pham

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13-16 and 20-24 is/are rejected.
- 7) ☒ Claim(s) 9-12 and 17-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/02/06, 5/26/06, 7/26/07 7/06/07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claim 7 is objected to because of the following informalities: In claim 7, line 7; there is a "." (period) after "vehicle body communication device". It should be changed to a ",". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bailie et al. (US 6,486,773).

Regarding claim 1: Bailie et al. disclose a tire pressure communicating method comprising a plurality of vehicle wheel communication devices (12) which are provided at a single vehicle wheel (T1-T4) and not connected to each other; and a vehicle body communication device (14) that communicates wirelessly with the plurality of vehicle wheel communication devices; wherein a transmission pattern or waveform is different

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from each other so that they do not overlap (without clashing) (col. 2, line 44-col. 3, line 10; Figs. 1, 2).

Regarding claim 2: Bailie et al. disclose each communication device comprises a detection sensor (60) (col. 5, lines 13-19).

Regarding claim 22: See claim 1 above.

Regarding claim 24: Bailie et al. disclose a waveform pattern for each vehicle communication device and communicates with the vehicle body communication device (col. 2, lines 46-67); thus, it is inherent that the vehicle body communication device recognizes the unique signal assigned to the particular vehicle communication device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-8 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailie et al. (US 6,486,773) in view of Katou (US 6,954,688).

Regarding claim 3: Bailie et al. does not disclose the communication signal from the wheel communication device is from a request signal from the vehicle body communication device. Katou disclose a tire pressure monitoring system comprising a request signal from the vehicle transceiver (40) to the transponder (30) of the wheel; the transponder, then transmit the tire data to the transceiver (40) of the vehicle (col. 3,

lines 50-65). At the time of the invention, it would have been obvious to response to a request signal as taught by Katou in a system as disclosed by Bailie et al. for providing an energy saving technique in which the tire information is only transmitted in response to a request signal.

Regarding claims 4-6: Bailie et al. disclose the wheel data are set to transmit at different cycle/pattern from each other (col. 2, lines 46-67).

Regarding claim 7: Bailie et al. disclose a tire pressure communicating method comprising a plurality of vehicle wheel communication devices (12) which are provided at a single vehicle wheel (T1-T4) and not connected to each other; and a vehicle body communication device (14) that communicates wirelessly with the plurality of vehicle wheel communication devices; wherein a transmission pattern or waveform is different from each other so that they do not overlap (without clashing) (col. 2, line 44-col. 3, line 10; Figs. 1, 2). Bailie et al. does not disclose the communication signal from the wheel communication device is from a request signal from the vehicle body communication device. Katou disclose the transceiver (40) includes four antennas; each assigned to communicate with one of the tire's transponder (30); the transponder includes ID codes used to identify the four transponders (30) (col. 2, lines 27-62) and Katou disclose a tire pressure monitoring system comprising a request signal from the vehicle transceiver (40) to the transponder (30) of the wheel; the transponder, then transmit the tire data to the transceiver (40) of the vehicle (col. 3, lines 50-65). At the time of the invention, it would have been obvious to response to a request signal as taught by Katou in a

system as disclosed by Bailie et al. for providing an energy saving technique in which the tire information is only transmitted in response to a requested signal.

Regarding claim 8: Bailie et al. disclose a tire pressure communicating method comprising a plurality of vehicle wheel communication devices (12) which are provided at a single vehicle wheel (T1-T4) and not connected to each other; and a vehicle body communication device (14) that communicates wirelessly with the plurality of vehicle wheel communication devices; wherein a transmission pattern or waveform is mutually different from each other so that they do not overlap (without clashing) (col. 2, line 44- col. 3, line 10; Figs. 1, 2).

Regarding claim 23: Katou disclose a tire pressure monitoring system comprising a request signal from the vehicle transceiver (40) to the transponder (30) of the wheel; the transponder, then transmit the tire data to the transceiver (40) of the vehicle (col. 3, lines 50-65).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 13, 14, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Lill (US 6,897,770).

Regarding claim 13: Lill discloses a tire pressure monitoring system comprising a plurality of vehicle wheel communication devices (14) which are provided at a single vehicle wheel (18); and each vehicle wheel communication device comprises a sensor (22), a vehicle body communication device (20) that communicates with the plurality of vehicle wheel communication devices, wherein the plurality of vehicle wheel communication devices include a first vehicle wheel communication device (16) that directly and wirelessly communicates with the vehicle body communication device, and a second vehicle wheel communication device (14, 24) that wirelessly communicates with the first vehicle wheel communication device (16) and indirectly communicates with the vehicle body communication device by using the first vehicle wheel communication device as a relay, the first vehicle wheel communication device transmits an identification number for the first vehicle wheel communication device to the vehicle body communication device, the second vehicle wheel communication device transmits an identification number for the second vehicle wheel communication device to the vehicle body communication device via the first vehicle wheel communication device (col. 3, lines 53-62; col. 4, lines 1-65; Figs. 1, 2).

Regarding claim 14: Lill discloses each vehicle wheel communication device transmits a value detected by the sensor, the vehicle body communication device determines which of the signals has been transmitted from which of the vehicle wheel communication devices based upon the detected values transmitted from a plurality of vehicle wheel communication devices (col. 5, lines 6-30).

Regarding claim 20: Lill discloses the vehicle wheel includes a wheel and a tire attached to an outer periphery of the wheel, and one of the first and the second vehicle wheel communication devices is provided at the wheel, and the other of the first and the second vehicle wheel communication devices is provided at the tire (Figs. 1, 2).

Regarding claim 21: Lill discloses the first vehicle wheel communication device is provided at the wheel, and the second vehicle wheel communication device is provided at the tire (Figs. 1, 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lill (US 6,897,770) in view of Bailie et al. (US 6,486,773).

Regarding claims 15 and 16: Lill does not disclose the different transmission pattern. Bailie et al. discloses a tire pressure communicating method comprising a

plurality of vehicle wheel communication devices (12) which are provided at a single vehicle wheel (T1-T4) and not connected to each other; and a vehicle body communication device (14) that communicates wirelessly with the plurality of vehicle wheel communication devices; wherein a transmission pattern or waveform is different from each other so that they do not overlap (without clashing) (col. 2, line 44-col. 3, line 10; Figs. 1, 2). At the time of the invention, it would have been obvious to one of ordinary skill in the art to utilize the different transmission pattern to provide a more effective communication technique that prevent interferences among different signals.

Allowable Subject Matter

Claims 9-12 and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of Lin (US 6,501,372), Kachouh et al. (US 7,095,316), Benedict (US 7,104,438) and Munch et al. (US 6,580,364) are cited to show a variety of tire monitoring systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan N. Pham whose telephone number is (571) 272-2967. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Toan N Pham
Primary Examiner
Art Unit 2612



October 24, 2007